

October-17-11 10:26:49 AM

**Item ID:** D3183-043

**Accept**

**\*N900040100\***

Setup Start \*NS1\*

**Revision ID:**

**Item Name:** Bracket Assembly

Stop \*NS2\*

**Start Date:** 17/10/2011      **Start Qty:** 4.00

**\*4\***

**Cust Item ID:**

**Required Date:** 27/10/2011      **Req'd Qty:** 4.00

**\*4\***

**Customer:**

**Reference:**

**Approvals:**

Process Plan: *M.C.J*

Date: 11/10/17

**Tooling:**

Date:

Run Start \*NR1\*

**QC:**

**Date:**

SPC (Y/N):

Date:

Stop \*NR2\*


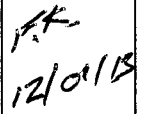

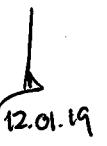
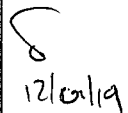
[illegible]

Dart Aerospace Ltd

W/O:		75033 WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3183-04B PAR #: \_\_\_\_\_ Fault Category: machining NCR: ☒ Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: Scrap Disposition: Scrap QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
12/01/19	#110	tool Bit Brake Damm out since possible causing a large mark on the out side of the part. R.C. Press.	 12.01.19	SCRAP PART. + Replner qty x1 BY <u>1/5004</u>	 12/01/19	 12/01/19	 12.01.19	 12/01/19

NOTE: Date & initial all entries

# Work Order ID 75033

October-17-11 10:26:49 AM

**\*75033\***

Page 2

Item ID: D3183-043 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Bracket Assembly  
 Start Date: 17/10/2011 Start Qty: 4.00 **\*4\*** Cust Item ID:  
 Required Date: 27/10/2011 Req'd Qty: 4.00 **\*4\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC8- Inspect parts - second check	0.00							
<b>*130*</b>									
QC	Memo	0.00				4	0		
Quality Control									
140		0.00							
<b>*140*</b>	Small Fab								
Small Fab	Memo	0.00							
Small Fab	Assemble D3183-043 as per Dwg D3183.								
150	QC5- Inspect part completeness to step on W/O	0.00							
<b>*150*</b>									
QC	Memo	0.00							
Quality Control									

*EP 12/01/19 (4)*

*(4)*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 75033****\*75033\***

Page 3

October-17-11 10:26:49 AM

Item ID: D3183-043 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Bracket Assembly  
Start Date: 17/10/2011 Start Qty: 4.00 **\*4\*** Cust Item ID:  
Required Date: 27/10/2011 Req'd Qty: 4.00 **\*4\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Identify as per dwg & Stock Location: <b>235</b>	0.00							
<b>*160*</b>									
Packaging	Memo	0.00							
Packaging									
170	QC21- Final Inspection - Work Order Release	0.00							
<b>*170*</b>									
QC	Memo	0.00							
Quality Control									

**12/1/23** **4**

**12-01-26** **4**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

October-17-11 10:26:54 AM

Page 1

Work Order ID: 75033

\*75033\*

Parent Item: D3183-043

\*D3183-043\*

Parent Item Name: Bracket Assembly

Start Date: 17/10/2011

Required Date: 27/10/2011

Start Qty: 4.00

Required Qty: 4.00

Comments:

IPP Rev:Pick:A04.02.18New issueKJ/DS

IPP Rev:B Changed Mat Size 08-06-26 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D3183-045

Manufactured

No

100

Each

0.0000

2

8

\*D3183-045\*

Bearing Assembly

D3121-21

Manufactured

No

140

Each

81.0000

2

8

\*D3121-21\*

Bolt

\*\*

Location

Loc Qty

Loc Code

ST235

81

66969

1

74546

80

M174B1.500X02.250

Purchased

No

140

f

22.2709

0.4583

1.929684

\*M174R1 500X02 250\*

17-4 SS Bar 1.50 X2.250

\*\*

Location

Loc Qty

Loc Code

MAT031

22.2709

108309

1.08

113568

11.8333

115806

9.3576

115806

1.93

483

12/01/12  
FK 12/01/13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	75033
<b>Description:</b> Bracket		<b>Part Number:</b>	D3183-3
<b>Inspection Dwg:</b> D3183	<b>Rev:</b> C1	Page 1 of 1	

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
R0.190	+/-0.030	R.196	—		R-G	
R0.063	+/-0.010	R.063	—		"	
0.182	+/-0.010	.181	—		Vern HL-06	
0.070	+/-0.010	.070	—		"	
0.100	+/-0.010	.101	—		"	
Ø0.201 x 0.100	+/-0.010	.199 x .095	—		"	
0.182	+/-0.010	.182	—		"	
5.32	+/-0.030	5.324	—		"	
5.036	+/-0.010	5.036	—		"	
2.120	+/-0.010	2.120	—		"	
1.290	+/-0.010	1.285	—		"	
0.365	+/-0.010	.361	—		"	
0.218	+/-0.010	.210	—		"	
1.030	+/-0.010	1.028	—		"	
1.90	+/-0.030	1.888	—		"	
1.012	+/-0.010	1.007	—		"	
Ø0.201 x 0.100	+/-0.010	Ø.205 x .096	—		"	
0.786	+/-0.010	.781	—		"	
Ø0.392	+0.002/-0.000	Ø.3931	—		"	
R0.19	+/-0.030	R.190	—		R-G	
3.954	+/-0.010	3.954	—		Vern HL-06	
0.162	+/-0.010	.163	—		"	
R0.19	+/-0.030	R.190	—		R-G	
R0.25	+/-0.030	R.250	—		"	
4.26	+/-0.030	4.260	—		Vern HL-06	
2.080	+/-0.030	2.080	—		"	
1.155	+/-0.010	1.155	—		"	
0.162	+/-0.010	.152	—		"	
0.36	+/-0.030	.360	—		"	
0.615	+/-0.010	.618	—		"	
0.435	+/-0.010	.437	—		"	
0.200	+/-0.010	.200	—		"	
0.381	+/-0.010	.383	—		"	
0.032	+/-0.010	.031	—		"	

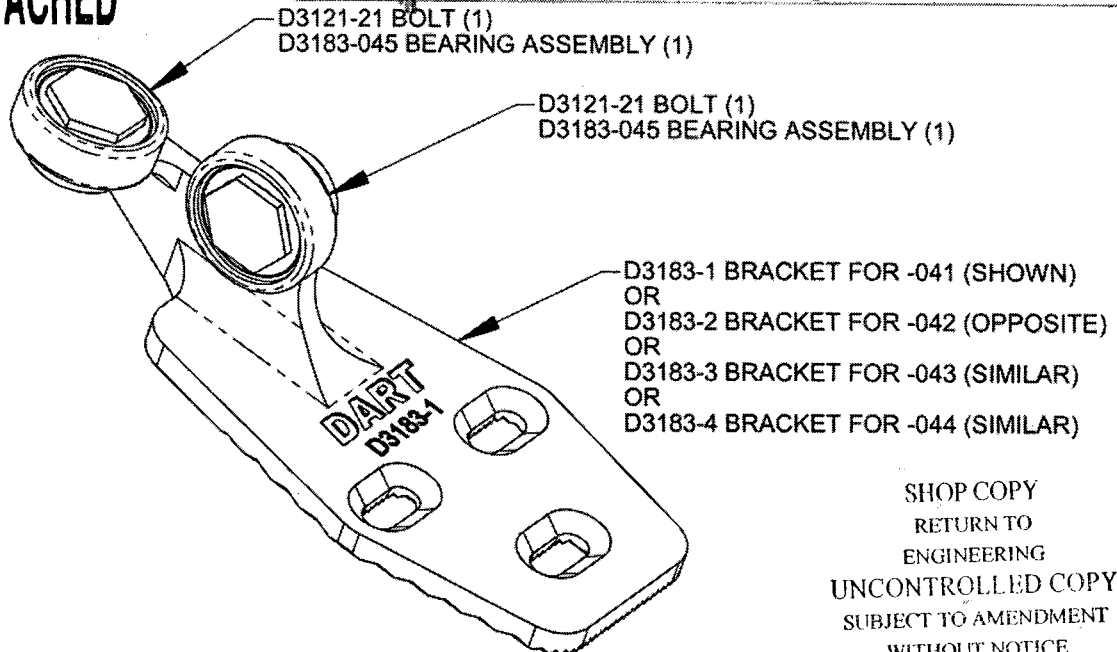
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<b>Date:</b> 12/01/12	<b>Date:</b> 12/01/19	<b>Date:</b>	N/A

Rev	Date	Change	Revised by	Approved
A	03.11.12	New Issue P/O D3183-043	KJ/RF	
B	04.03.15	Changes as per revision C	KJ/JLM/RF	
C	06.03.09	Dwg Rev update	KJ/JLM	
D	08.01.28	0.182 dimension removed	KJEC/DD	



DESIGN #	DRAWN BY #	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. <b>D3183</b>	REV. C SHEET 1 OF 4
DATE <b>04.02.17</b>		TITLE <b>BRACKET ASSEMBLY</b>	SCALE 1:1
A	03.01.24	NEW ISSUE	
B	03.06.17	REMOVE BEARING; 1.012 WS 0.882	
C	04.02.17	ADD -045/-9; 0.182 WAS 0.431	
CI	# 04.11.09	0.830 WAS 0.850	

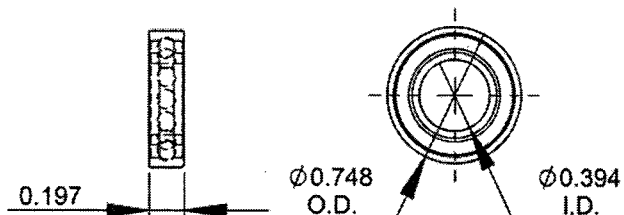
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04.03.01 #  
**DEO ATTACHED**



**D3183-041 BRACKET ASSEMBLY (SHOWN)**  
**D3183-042 BRACKET ASSEMBLY (OPPOSITE)**  
**D3183-043 BRACKET ASSEMBLY (SIMILAR)**  
**D3183-044 BRACKET ASSEMBLY (SIMILAR)**

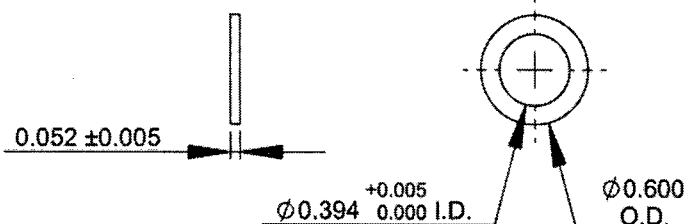
SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. **75033**

**11/10-17**



**D3183-5 BEARING:**  
**SPECIFICATION CONTROL DRAWING**

- 1) SINGLE ROW, DEEP GROOVE, CONRAD TYPE, SHIELDED
- 2) POSSIBLE SUPPLIER: NSK P/N 6800ZZ
- 3) ALL DIMENSIONS ARE IN INCHES



**D3183-7 WASHER**

- 1) MATERIAL: AISI 303 ROUND BAR (M303R) ANNEALED
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES

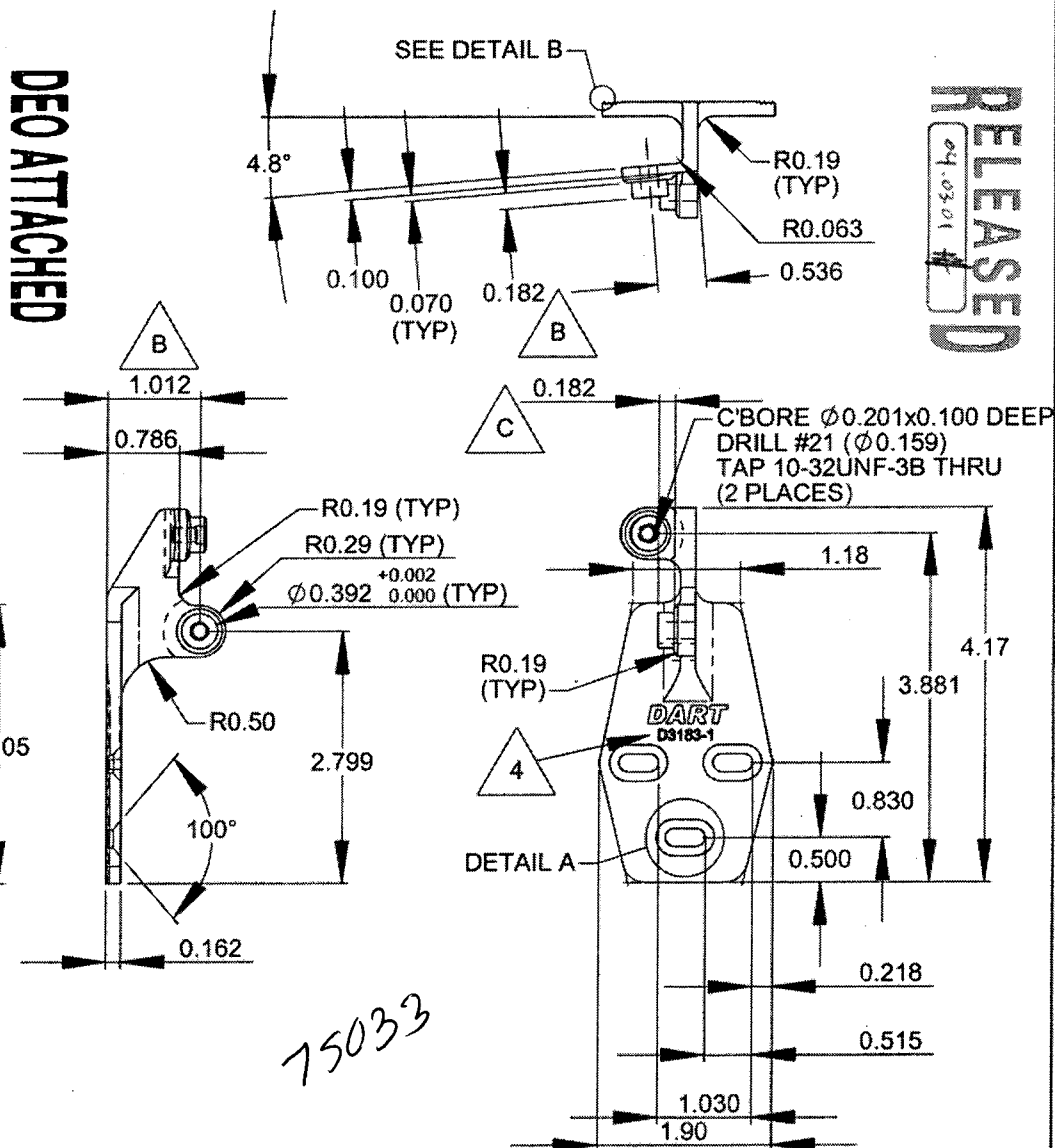
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ISSUED

DESIGN	DRAWN BY	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA		REV. C
CHECKED	APPROVED	DRAWING NO.		SHEET 2 OF 4
DATE		D3183		SCALE

04-0301



**DEO ATTACHED**





D3183-1 BRACKET SHOWN  
D3183-2 BRACKET OPPOSITE

- 1) D3183-1 CAN BE MADE FROM D3183-3  
D3183-2 CAN BE MADE FROM D3183-4
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643  
(REF DART SPEC. M17-4-B)  
MIN ULTIMATE STRENGTH = 150 ksi  
MIN YIELD STRENGTH = 100 ksi
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 4) ENGRAVE DART P/N & LOGO AS SHOWN
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES

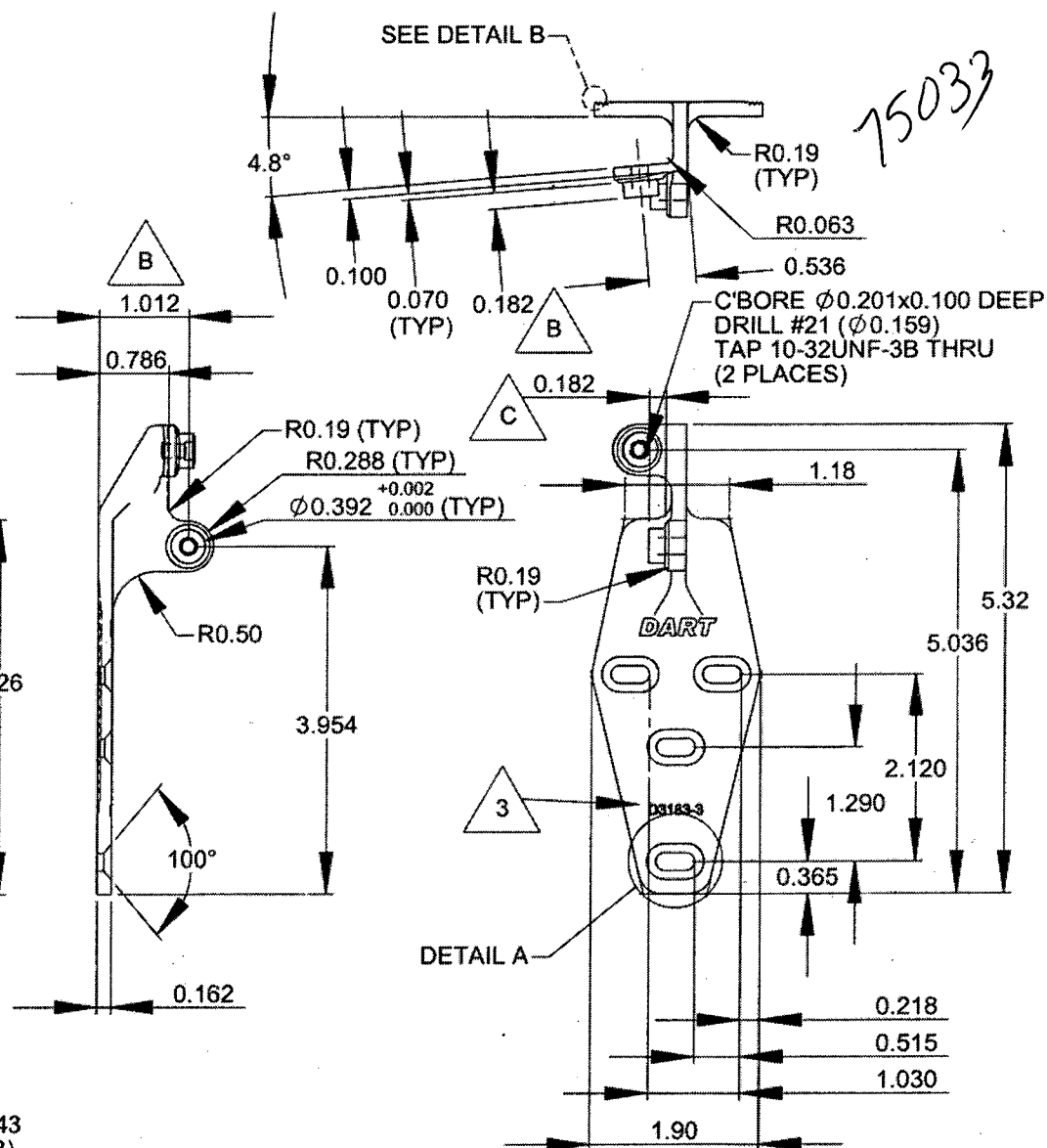
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DESIGN		DRAWN BY		DARI AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	REV. C
CHECKED		APPROVED		DRAWING NO. D3183	SHEET 3 OF 4
DATE	04.02.17			TITLE BRACKET ASSEMBLY	SCALE 1:2

SEE DETAIL B-

[illegible]

**D3183-3 BRACKET SHOWN**  
**(REPLACES BELL P/N 412-030-304-105)**  
**D3183-4 BRACKET OPPOSITE**  
**(REPLACES BELL P/N 412-030-304-106)**

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643  
(REF DART SPEC. M17-4-B)  
MIN ULTIMATE STRENGTH = 150 ksi  
MIN YIELD STRENGTH = 100 ksi
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 3) ENGRAVE DART P/N & LOGO AS SHOWN
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

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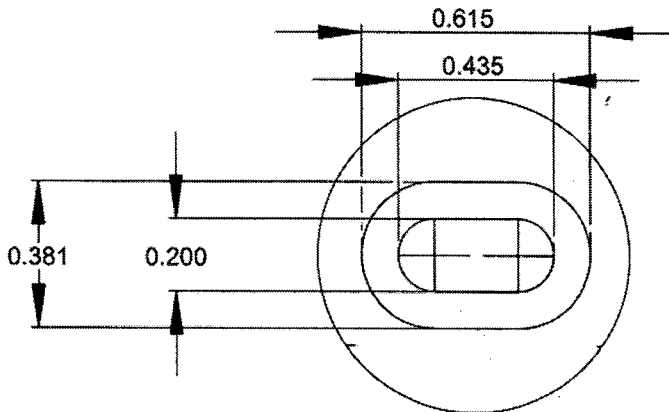
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RELEASED

24-03-01



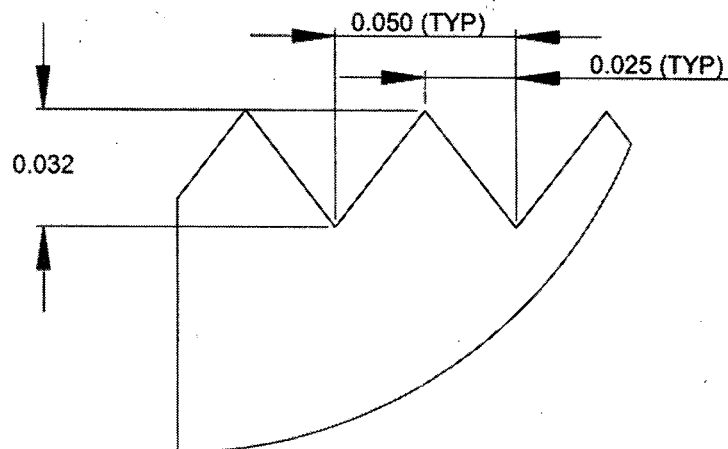
DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. <b>D3183</b>	REV. C SHEET 4 OF 4
DATE <b>04.02.17</b>	TITLE <b>BRACKET ASSEMBLY</b>		SCALE 1:1



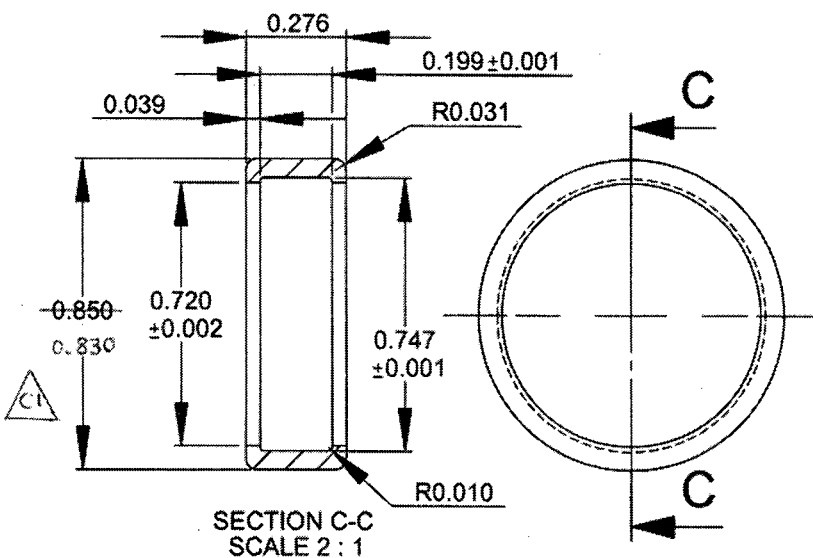
DETAIL A (2 : 1)

**RELEASED**  
04.03.01 *[Signature]*

**DEO ATTACHED**



DETAIL B (20 : 1)



**D3183-9 CAP**

- 1) MATERIAL: DELRIN ROD, Ø1.00  
(REF DART SPEC. M-DELRIN-R1.00)
- 2) TOLERANCES ARE PER DART QSI 018  
UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

**D3183-045 BEARING ASSEMBLY**

- 1) ASSEMBLE D3183-5 BEARING AND  
D3183-9 CAP

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DRAWING NO. D3183	TITLE BRACKET ASSEMBLY	REV.C1	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D3183-C1-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>q</i>	CHECKED <i>J</i>	MFG. APPR. <i>MA</i>	APPROVED <i>MP</i>		DE APPR. <i>MP</i>		
DATE 10.05.14	DATE 10.06.30	DATE 10.06.30	DATE 10/06/30		DATE 10/06/30		

D3183-5 BEARING

ADD POSSIBLE SUPPLIER: KML P/N 6800-ZZ

BASIC LOAD RATING REQUIREMENT: Cr = 1720 N (386 lb) MIN [DYNAMIC]  
Cor = 840 N (188 lb) MIN [STATIC]

REF PAR 10-012

75033

**RELEASED**  
2010-07-22  
*WD*